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Food Aid Quality Review Phase II: Technical Report No.13

October 2014 - December 2014

This report was produced for the United States Agency for International Development. It was prepared by Tufts University, under the terms of contract AFP-C-00-09-00016-00 awarded to the Friedman School of Nutrition Science and Policy

Acronyms

BCC	Behavioral Change Communication
BMC	Beneficiary's Mother/Caretaker
CBO	Country Backstop Officer
CSB	Corn Soy Blend
CSB+	Corn Soy Blend Plus/Supercereal
CSB++	Corn Soy Blend Plus Plus/Supercereal Plus
CSWB/CSB14	Corn Soy Whey Blend/Corn Soy Blend 14
DMAP	Data Management and Analysis Plan
FAQR	Food Aid Quality Review
FBF	Fortified Blended Food
FGD	Focus Group Discussion
FDPs	Food Distribution Points
FFP	Office of Food for Peace (USAID)
FFPMIS	Food for Peace Management Information System
GF&N	Global Food & Nutrition, Inc.
HNP	Health and Nutrition Promoter
IRSS	Institut De Recherche En Sciences De Sante
LNS	Lipid-based Nutrition Supplement
M&E	Monitoring and Evaluation
MAM	Moderate Acute Malnutrition
MCHN	Maternal Child Health and Nutrition
MOH	Ministry of Health
NHSRC	Nation Health Science Research Center
NSRDEC	Natick Soldier Research, Development & Engineering Center
PI	Principal Investigator
PL 480	Public Law 480 (Agricultural Trade Development and Assistance Act)
PM	Program Manager
PM2A	Preventing Malnutrition in Children Under 2 Approach
PVO	Private Voluntary Organization
REFINE	Research Engagement on Food Innovation for Nutritional Effectiveness
RSB+	Rice Soy Blend Plus
RUSF	Ready to Use Supplementary Food
TOPS	Technical and Operational Performance Support
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
WFP	World Food Programme (United Nations)
WHO	World Health Organization
WSB+	Wheat Soy Blend Plus

Background Information

The United States Agency for International Development's (USAID) Office of Food for Peace awarded a two-year extension contract (FAQR Phase II) to Tufts University's Friedman School of Nutrition Science and Policy in October 2011 and a third-year extension in 2013 for a total of five years. FAQR Phase I, conducted from 2009 to 2011, examined the nutritional needs of beneficiary populations across the developing world and the nutritional quality of commodities currently available to meet those needs, with the objective of improving the quality of Title II food aid commodities and programming. The findings of FAQR Phase I were published as a report, *Delivering Improved Nutrition: Recommendations for Changes to U.S. Food Aid Products and Programs* (USAID, April 2011), which is available at www.usaid.gov/what-we-do/agriculture-and-food-security/food-assistance/resources/research-and-policy-papers.

The FAQR is part of a series USAID and United States Department of Agriculture (USDA) activities aimed at enhancing product choice under Title II of Public Law 480 (PL480), improving quality control and assurance (of both processes and products), and updating technical guidance and the evidence base for programming approaches. The present contract builds on work performed under the original FAQR and will focus on implementing recommendations made in Phase I for changes in food aid products, programming, and processes.

FAQR Phase II activities include advancing the evidence base through production and testing of improved food products, their packaging and delivery methods, and comparative studies of products' nutritional effectiveness and cost-effectiveness, implementation research and pilot projects, and facilitation of interagency and multi-sectoral coordination. FAQR Phase II continues its consultative process to interact with and solicit input from a wide range of stakeholders.

The work of the FAQR Phase II continues to address three areas of focus: products (development and testing of new or modified nutritionally enhanced food aid commodities); programs (the uses of such foods to meet nutritional goals in the context of Title II programs); and processes (e.g., safety and quality assurance in the supply chain, harmonization of processes among donor agencies, and coordination among agencies within the US Government). Specific areas of concentration include the following.

Products

Phase II is focusing on: the development of specifications of the updated Fortified Blended Foods (FBF) including Corn Soy Blend 14 (CSB14), recommended in the Phase I report, as well as milled flours, enhanced vegetable oil, and the micronutrient premix(es); CSB laboratory and pilot production testing; acceptability trials; assessments and recommendations for supply chain and related issues.

Programs

Activities include strengthening the evidence base for food assistance programming through expert consultations and workshops on key topics and issues with representatives of the various Title II implementing agencies and other stakeholders. Multiple activities are being undertaken which include the review of food programming guidance provided to Title II implementing agencies and a review of the data collected from Title II implementing agencies as part of required reporting, and how the data are used and could be better used to inform programming. Several field studies are also underway. In Malawi, a field study that finished at the end of FY14 sought to assess the feasibility of ensuring that when CSB is programmed with oil, beneficiaries use the oil as instructed to prepare CSB porridge for beneficiary children. The study also assessed the impact of package changes (providing CSB in 2-kg packages rather than in bulk), in conjunction with appropriate behavior change messages, on correct use, and other aspects such as intrahousehold sharing. Analysis of this field study will be completed in FY15. The study in Burkina Faso is assessing the effectiveness and cost effectiveness of the new CSB14, delivered with oil, as compared with alternatives such as lipid-based nutrition supplement (LNS) products and other fortified blended foods (including CSB+ and oil and WFP's formulation of Supercereal Plus (SC+) with skim milk powder and oil incorporated into the matrix), in the prevention of moderate wasting (moderate acute malnutrition or MAM), the prevention of stunting, and the promotion of adequate growth in children 6-23 months. The study in Sierra Leone assessed the effectiveness and cost-effectiveness of these same foods in the treatment of MAM in children under age five. Due to the Ebola Virus Disease (EVD) Outbreak, FAQR suspended permanently the treatment study in Sierra Leone, and began scoping new countries to restart this study. Analysis of the data collected during the Sierra Leone study prior to study cancellation will be completed in early FY15.

Processes

FAQR II focuses on the formation of an Interagency Food Aid Technical Committee as well as implementing regular meetings with major food aid agencies (WFP, UNICEF, USAID, USDA, and others) to address the need for harmonization of food products and related procurement and quality assurance processes used in Title II food aid.

Activities for the period October 1, 2014 – December 31, 2014**Implementation of Phase II**

During this quarter, the following activities were undertaken.

A. Products

Overview: Accelerated shelf life studies on FAQR products; recommendation development on the supply chain process; review and documentation of products upgrade, introduction, harmonization and rollout issues; systematic review manuscript.

1. Accelerated Shelf Life Study

The FAQR team continues to receive and monitor results of the accelerated shelf life and stability studies of CSWB (CSB14), SC+, CSB+, RUSF, and fortified vegetable oil. During this quarter, the team received Certificates of Analyses from suppliers with test results for the final data points. All testing is complete for all products through the 26-week end line analysis. The interim report on the protocol will be complete next quarter.

2. Product Introduction, Rollout and Supply Chain Quality Assurance

The team updated and expanded the product rollout interim report through the quarter. The report analyzes the experience of USAID during the period of FAQR Phase II and makes recommendations for future product rollouts. The team started work on a framework to streamline product introduction and rollouts.

3. Technical Assistance – Future Product Rollout

The FAQR team continues to provide technical assistance to USAID/FFP and work on documents, specifications and templates related to future product introduction and rollouts. The team continues work on drafts of specifications for five (5) new products: fortified milled rice, wheat soy blend plus /Super Cereal (SC), rice soy blend plus /SC and Super Cereal Plus (SC+) wheat and rice versions. The team also developed a comparison of the technical specifications (including composition, nutrient content, microbiological characteristics) of Emergency Bars (WFP High Energy Biscuit and USAID A29) during the quarter.

4. Product Guidance – New Commodity Fact Sheets & Quarterly Fact Sheet Updates

The FAQR team continues to provide USAID/FFP quarterly updates of the Commodity Reference Guide Fact Sheets. The team created fact sheets for new or revised products, including a unified RUTF/RUSF and Fortified Milled Rice.

5. Systematic Review Manuscript

The FAQR team continues work on the manuscript titled, *Systematic Review and Meta-Analysis of the Comparative Effectiveness of Ready to Use Foods and Fortified Blended Foods on Growth and*

Recovery from Moderate Acute Malnutrition (MAM) in Young Children. The plan is to have this submitted to a peer-reviewed publication by the late spring of 2015.

B. Programs

Overview: Phase II data entry and cleaning, and field exit process in Malawi; beneficiary enrollment, data collection and entry, recruitment and training of “back-up” enumerators, data entry template revisions, porridge sample analysis, and commodity pipeline estimates in Burkina Faso; entry of data from Sierra Leone; relocation of the Four Foods Treatment Study.

I. FAQR Field Studies

a. Feasibility and Acceptability Study-Malawi

1. Data Entry and Cleaning

This quarter, the Tufts field research coordinator from Malawi worked closely with five data entry clerks and the CSR data manager on the data entry and data cleaning process for Phase II data. The Malawi-based team completed entering baseline, Phase I and Phase II data collected from FDP observations, PVO staff members, CHWs, lead mothers, BMCs, and in home observations. The team will enter the remaining data from market observations and study/program costs next quarter. The team conducted field callbacks to confirm information collected during field data collection.

Annex I outlines the completed data sets entered.

2. Field Exit Process

The team completed the field exit process on December 13, 2014. Before exiting the field, the team held meetings with USAID mission and several partners to give feedback on the study. The team also met with CSR to review data deliverables. At the end of this quarter, the final report on data from CSR is still pending. The CSR data department in Malawi has the hard copies of original questionnaires locked in cabinets. The Tufts team remains in contact with the CSR team to discuss any data issues that require checking the original questionnaires. The team conducted a final presentation of preliminary results with all field study partners. Refer to Annex II for final presentation.

b. Effectiveness and Cost-Effectiveness Study – Prevention - Burkina Faso

1. Beneficiary Enrollment

This quarter, the team enrolled 1,971 beneficiary children. The total beneficiary children enrolled to date is 3,028. Annex III shows enrollment information for August – December 2014 broken down by study arm.

2. Data Collection

Out of the 62 in-depth interviews of beneficiary mothers completed, the team collected porridge samples in 60% (37) of households, and 100% (62) water tests. Annex IV shows the qualitative data collection details.

The team continued field supervision and quality control of data collection. The team adjusted inclusion criteria to reflect the realities of the field, set up a system to ensure that enrolled children were correctly followed up, and created a distribution report form to track inclusion and follow-up.

3. Data Entry

The team finalized enrollment forms, follow-up forms and community questionnaires. The field team entered 40% (1,211) enrollment forms (20% of total eventual enrollment), and 100% (199) community questionnaires. Follow-up forms are entered on a continual basis, as new data are collected each month. Annex V describes follow-up measurement forms entered at least once into the database.

The Tufts University IRB approved questionnaire modifications.

4. Continued Training of “Back-up” Enumerators

This quarter, the in-country collaborating research partner, IRSS, selected and trained 27 additional enumerators by sending them to work with the existing teams in the field. The team plans to choose 11 of these enumerators to bolster each existing team with another member. The remaining 16 enumerators will be employed on a need-only basis.

5. Database Templates

The team continues to revise the data entry templates as they become available from IRSS.

6. Porridge Samples

This quarter, the team prepared porridges with known quantities of CSB flour and Fortified Vegetable Oil (FVO), and sent the prepared samples to Institut de Recherche en Sciences Appliquées et Technologies (IRSAT) to verify the porridge testing procedures.

The team compared the lab results to the known calculations, and determined discrepancies with the measured results. The team continues to work with the lab to determine the issues that could be yielding inconsistent results. The team identified a possible second lab to work simultaneously with IRSAT to establish procedures and validate their results.

7. Commodity Pipeline Estimates

The team worked with ACDI/VOCA to adjust the commodity pipeline as a function of historic data of actual number of beneficiaries to whom commodities have been distributed. The Tufts team continues to work with ACDI/VOCA to adjust the subcontract to reflect changes to pipeline estimates.

c. Effectiveness and Cost-Effectiveness Study – Treatment - Sierra Leone

1. Data Entry

This quarter, the FAQR Tufts team and the Washington University team completed all clinic and survey data entry.

2. Restarting the Four Foods Treatment Study

This quarter, the FAQR team continued identifying potential countries to relocate the four foods treatment study. The team is currently exploring Burundi, the Karamoja region of Uganda, Burkina Faso and Malawi as potential locations for restating the four foods study. The team planned a scoping trip to Burundi and Karamoja for this quarter. However, the team postponed the scoping trip due to logistical issues; lack of country clearance from Uganda USAID mission, and request form the ministry of Health in Burundi for more information prior to approving the trip.

2. Cost Effectiveness

The team prepared costing tables for Sierra Leone and Burkina Faso. The team continued to fill in the cost table for Malawi with the Malawi field research coordinator. The FAQR Costing Specialist continued to develop the costing model and prepare a User's Manual.

3. Data Management

This quarter, the FAQR Data Manager continued updating the Data Management and Analysis Plans (DMAPs) for Malawi, Sierra Leone and Burkina Faso field studies with FAQR members. The team revised the Sierra Leone DMAP based on the collected data post withdrawal due to the Ebola Virus Disease (EVD).

C. Processes

Overview: Harmonization process with WFP and USAID; REFINE; Interagency meeting

1. Harmonization process with WFP and USAID

This quarter, FAQR principal investigator, Dr. Patrick Webb, wrote an FAQ, *Standard of evidence for research on 'what works' in management of MAM*, for the CMAM forum. Refer to Appendix I for the full document.

The FAQR team began planning with the next harmonization meeting for April 2015 with partners from USAID, WFP and UNICEF. The team reviewed and updated next steps from the last harmonization meeting.

This quarter, the FAQR team communicated with the U.S. Army Natick Soldier Research, Development & Engineering Center (NSRDEC) on the following areas: packaging, high-energy biscuits, field monitoring tools and supply chain.

2. REFINE (Research Engagement of Food Innovation for Nutritional Effectiveness)

This quarter, the FAQR team continued work on the REFINE website by updating the field research matrix, creating a publications library and highlighting current research gaps. The team also began compiling monthly REFINE updates of recent activities and publications relating to food aid and malnutrition. The intent is to be more proactive in updating this website and adding additional analytical insights, not just summaries of protocols.

3. Tenth Interagency Meeting

The FAQR team is planning the tenth interagency meeting, which will likely be held at the end of next quarter.

Meetings and Events during the period October 1 – December 31, 2014

The team continued to hold working group meetings throughout the quarter to plan FAQR Phase II activities. Selected specific meetings included the following:

- **FAQR Costing Meeting (remote)**

October 6, 2014

Dr. Steve Vosti, Costing specialist, and Kassahun Melesse, Costing specialist assistant, walked through the cost projection tool, and explained the methodology and data sources.

- **Dr. Bea Rogers, Jamie Green and Shelley Marcus in Washington DC
TOPS/FSN and Meeting with Country Backstop Officers (CBO)**

October 14, 2014

Dr. Bea Rogers, co-Principal Investigator, Jamie Green, Field Research Director, and Shelley Marcus, Senior Research Coordinator, attended the TOPS/FSN Network Sustainable Impact Resource Guide workshop where they represented the FAQR team in improving their understanding of key concepts and approaches related to sustainability and sustainability measurement. The FAQR team members also met with CBOs from Uganda and Burundi to discuss the relocation of the treatment study.

- **Objectives Meeting for FAQR Visit to U.S. Army Natick Soldier Research, Development & Engineering Center (NSRDEC)
October 20, 2014**

The Tufts FAQR team held a call with USAID to discuss USAID's visit to the U.S. Army NSRDEC in September, and identify areas of interest for potential collaboration to be further discussed during a Tufts visit to Natick.

- **Ilana Cliffer in Burkina Faso
Commodity Pipeline Meeting
October 22, 2014**

The Burkina Faso Field Study Coordinator, Ilana Cliffer, met with ACDI/VOCA to discuss calculations of commodity pipeline.

- **Global Food & Nutrition in Washington DC
Food Aid Consultative Group Meeting
November 6, 2014**

Global Food & Nutrition attended this twice-yearly meeting where USAID and USDA discussed the budget outlook for food aid programs. Food for Peace emphasized the importance of cost per beneficiary calculations in proposals and mentioned the upcoming 60th anniversary of the program.

- **Ilana Cliffer in Burkina Faso
IRSS Senior Team Meeting
November 24, 2014**

Ilana Cliffer met with the IRSS senior team to discuss study logistics, lack of study materials, i.e. scales and length boards, and procedures for obtaining needed materials, data quality assurance methods, criteria for following up with children in the household if they do not come to the food distribution site, and procedures for focus group discussions.

- **Dr. Patrick Webb in Kathmandu, Nepal
Meetings with USAID Mission
November 2014**

The FAQR Principal Investigator, Dr. Patrick Webb, met with mission staff in Kathmandu

involved in planning the new Title II activities in Nepal to explore ways in which there could be collaboration on FAQR operations research.

- **Gray Maganga in Malawi**
Malawi Field Exit Meetings
October - December 2014

The FAQR Field Research Coordinator in Malawi, Gray Maganga, met with CRS, USAID mission and PVOs (Africare, Save the Children and Project Concern International) to discuss preliminary study results, data use and publications, and field exit plan and process. The meetings provided an opportunity to answer questions on the recommended ratio of distributing and preparing CSB and FVO. PVOs included these proportions in their next round of Title II Development Food Aid Programs proposals for Malawi. During these meetings, the FAQR team included 'Tufts gratitude' sessions to thank CRS and PVOs for their efforts during this field study.

Gray Maganga also met with the Ministry of Health (MOH), Nation Health Science Research Center (NHSRC), and local partners to review the study process, share preliminary results and discuss the use of data. Participants provided feedback on the study process during these meetings.

- **Global Food & Nutrition in Washington DC**
Food for Peace Management Information System (FFPMIS) Training
December 4, 2014

Global Food & Nutrition attended the Food for Peace Management Information System Training, a session that was part of USAID/FFP's training program for food aid awardees. Trainer, Ford Tordiff of USAID, introduced data entry procedures for emergency applications, development applications, and Pipeline and Resource Estimate Proposals (PREP) in FFPMIS. GF&N staff participated in this training to get an update on the latest entry system for program inputs in the FFPMIS, and gain a better understanding of the commodity calculator and ration entry elements.

- **Gray Maganga in Malawi**
Relocation of Treatment Study Meetings
December 21, 2014

The FAQR Field Research Coordinator in Malawi, Gray Maganga, met with CRS and PCI to discuss the potentials of relocating the FAQR Treatment Study to Malawi.

- **USAID/WFP Scoping Meetings**
October - December 2014

The FAQR team held a series of discussions among Tufts University, Washington University, USAID and WFP to discuss details of closing down study operations in Sierra Leone, and country options for the relocation of the Four Foods Treatment Study.

- **Informational Meetings for Relocation**

- October – November 2014**

- The FAQR team held a series of Skype/phone meetings with key contacts in Uganda and Burundi to gather information on the feasibility of conducting research in each country. Field Research Coordinators in Malawi and Burkina Faso met with key contacts in-country to discuss potential opportunities for conducting the treatment study in Malawi and Burkina Faso.

- **Dr. Patrick Webb, Shelley Marcus, Jocelyn Boiteau, Kristine Caiafa in Boston**

- REFINE Website Meetings**

- October - December 2014**

- FAQR team members met throughout the quarter to discuss updating the REFINE website to create a more user-friendly resource focusing on current gaps in food intervention research.

Administration and Budget

During this quarter, the following activities were undertaken.

A. Budget

The FAQR team continues to monitor the budget and make projections based on real-time expenditures and assessments of fiscal realities. FAQR Phase II is currently funded through May 31, 2015.

B. Staffing

The FAQR team hired a new full-time data analyst, Breanne Langlois, who will start with FAQR at the beginning of next quarter.

Breanne received her MPH in Global Health from Boston University in 2012. Her emphasis area was Research Methods and Data Analysis. Most of her international experience has been in Ethiopia, where she served as a Peace Corps Volunteer in the first health sector program from 2007-2009. She spent the past two years at Boston Medical Center, supporting resident and faculty Emergency Medicine research, including data analysis support.

Plans for the coming quarter (January-March 2015)

January-March 2015 represents the fourteenth quarter of implementation for FAQR Phase II and the

second quarter of the costed extension until end of May, 2015.

A. Products

a. Product Introduction and Rollout Activities

- i. Review comments and update report
- ii. Continue work on final summary report and comprehensive report, and submit to USAID/FFP next quarter
- iii. Develop related presentation materials based on feedback

b. Shelf Life and Stability Studies

- i. Review comments and finalize report on this activity
- ii. Submit final report to USAID/FFP

c. Commodity Reference Guide (CRG) Quarterly Updates

- i. Continue to work with USAID/FFP to update the Commodity Reference Guide Fact Sheets, and complete Fact Sheets as specifications for new products are approved

d. Product Technology and Innovation

- i. Continue planning visit to the U.S. Army NSREDC for next quarter

B. Programs

a. Feasibility/Acceptability Study (Malawi)

- i. Complete data entry and organization for quantitative and qualitative data
- ii. Hold team meetings to complete the data analysis plan
- iii. Continue analysis of Phase II data
- iv. Continue analysis of cost data
- v. Complete data analysis and preparation poster presentation for Experimental Biology 2015
- vi. Plan dissemination activities (reports, presentations, publications) for Malawi findings

b. Prevention Effectiveness Study (Burkina Faso)

- i. Hire and train additional enumerators as permanent fixtures in the field teams
- ii. Facilitate and transcribe focus group discussions
- iii. Hire and train additional data entry agents on a short-term basis
- iv. Continue the process of lab verification for porridge testing, and sign a contract with the selected lab
- v. Continue to revise data entry templates as they become available
- vi. Continue conducting in-home observations
- vii. Continue conducting in-depth interviews
- viii. Continue conducting distribution observations
- ix. Start lead mother interviews, and focus groups discussions

- x. Pre-test truck riding instrument
- xi. Hold motivational meetings with distribution committees

c. Treatment Effectiveness Study (Sierra Leone and New Country)

- i. Hold FAQR team meeting to discuss Sierra Leone data and data management and analysis plan
- ii. Complete double data entry for clinic data from Sierra Leone
- iii. Complete data analysis
- iv. Complete data analysis and preparation poster presentation for Experimental Biology 2015
- v. Finalize reports of study activities, and data for WFP and USAID
- vi. Plan dissemination activities (reports, presentations, publications) for Sierra Leone findings
- vii. Submit continuing review to Tufts University IRB for Sierra Leone (as the team continues to analyze the data)
- viii. Modify study components (as needed) and submit Tufts University IRB and submit to chosen country ethical review board
- ix. Continue to gather information and make contacts with individuals from countries of interest to determine viable options for the relocation of the Four Foods Treatment Study
- x. Conduct a scoping trip to countries of interest to make local contacts, to identify potential implementing and research partners, and to assess feasibility of conducting research in each location
- xi. Make a selection of new treatment study country

d. Cost Analysis

- i. Integrate new data analyst
- ii. Continue revising DMAP for Sierra Leone replacement country for the four foods study
- iii. Continue to edit costing model for all effectiveness study products and product comparisons based on feedback from FAQR team
- iv. Complete Costing Tool and User Manual
- v. Prepare analysis roles and plans for the new data analyst and the Malawi field research coordinator

C. Process

a. REFINE

- i. Complete REFINE website updates, and make live online

b. Harmonization Meeting

- i. Continue planning for follow-up Harmonization meeting of USAID, WFP and UNICEF planned for April 2015
- ii. Continue planning FAQR visit to U.S. Army NSRDEC; conduct visit and hold de-brief meeting with team

c. Interagency Work

- i. Continue to follow up activities and next steps from this quarter's meeting and progress on technical issues
- ii. Discuss and plan FY15 Interagency Meeting

Annex I. Feasibility/Acceptability Study in Malawi Completed Data Sets

Category - Questionnaire No.	Study Subjects and Participants	Baseline	Phase I		Phase 2		
			Intervention FDP (12)	Control FDP (4)	Treatment FDPs (6) – Oil, BCC	Treatment FDPs (6) – Oil, BCC & Packets	Control FDPs (4)
PVO Staff Members	M&E – PM Interview guide	1	1	-	3		
	MCHN Coordinator – PM interview guide	4	4	-	4		
	Logistics and Commodity person – Costing tool	4	4	-	4		
	Program Manager – PM Interview guide	3	3	-	3		
	Health facilitator – PM interview guide	3	3	-	3		
Health Care Workers	Health promoter – Form 16	28	28	9	12	12	12
	Health Surveillance Agents – Form 16	28	28	9	12	12	20
	Resource person – Form 16	17	14	5	14	12	14
Care Group Lead Mothers	Care Group Lead mothers (Individual Interviews) – Form 14	82	83	28	70	70	70
	Care Group Lead mothers (3 FGDs - treat, 3 FGD - control) – Form 15	55	55	28	36	36	36
Beneficiary Mothers/Caretakers	Beneficiary Mothers/Caretakers (Individual Interviews) – Form 12	289	276	127	200	200	200
	Beneficiary Mothers/Caretakers (4 FGDs intervention, 3 FGDs control) – Form	55	55	41	36	36	36
	Beneficiary Mothers/Caretakers (in home observations)	18	18	9	18	18	9
Market Observations	Observation for market	14	-	-	18	18	18
FDP Observations	Beneficiary Mothers/Caretakers (FDP observations)	60	24	8	36	36	24
Warehouse to FDP timing/ Ride Along (# of FDPs)	(warehouse, transport and distribution staff)	-	-	-	4	4	4
Tracking Intervention Costs	(Informal interviews, Doc Review, etc.)	-	-	-	22		
Laboratory Analysis	Porridge samples	283	422		648		

Annex II. Final presentation of preliminary results for Malawi field study partners

Tufts University – FAQR 2

Malawi Study - Updates

FEASIBILITY AND ACCEPTABILITY OF 100g.CSB AND 30g.FVO IN MALAWI



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Nov. 17.2014



Background

- Preventing and Treating MAM commonly depend on Supplementary Feeding (SF)
- There are many efforts but no solid agreement on the most effective and cost-effective way to prevent/treat MAM (Hence common relapses and SAM)
- Recommended approaches targeting the first 1000 critical days of the child
- Children take in 17g to 400g of CSB per day (sharing determinants – HH composition, Social and behavioral, food insecurity, mothers involvement in child feeding, etc)
- Unquestionable need for a child to take in sufficient caloric density (200 to 600 calories → Age specific)



Background- ctd

- Appropriate diet for MAM child: High content of growth micronutrients; high, sufficient, quality, available protein; adequate appropriate quality fat; high energy density, available and affordable
- Food Aid Quality Review –Since 2009: FFP ongoing process to review and improve the quality and efficiency of USAID SF, state of science and technology... to best address nutrition-related needs...products, programming and processes.



Study Aims

- Increase percent of oil in prepared porridge
- Increase percent of beneficiary mothers/caretakers (BMCs) preparing the porridge with the ratio of 30g oil:100g CSB
- Decrease percent of BMCs reporting within household sharing of porridge;
- Prevent increases in between household sharing/selling of corn soy blend (CSB) (due to repackaging) and/or fortified vegetable oil (due to increased ration)
- Compare costs and time for interventions
- Successful communication of preparation methods by health workers to BMCs



Collaborators





Methodology

- Repeat cross-sectional - with Control (Baseline, Phase 1, Phase 2)
- Multi-stage cluster random sampling (FDPs serving as clusters)
- Proportion-to-Size Technique
- Interviews, Focus Group Discussions, Observations, Laboratory Analysis, Documents review



Interventions

Phase I (October 2013 to January, 2014)

1. Increasing FVO (from 1L to 2.6L) in 12 FDPs (4FDPs served as Controls)
 - Treatment: 8Kg CSB13 and **2.6L FVO** per beneficiary
 - Controls: 8Kg CSB and 1L FVO per beneficiary



FVO intervention



BCC intervention

2. BCC information to treatment sites (Information Designing, Training CHW and BCC material development)

- Developed recipe for cooking CSB13/CSB+ and FVO porridge
- Trained over 300 community health care workers on CSB-FVO information
- Designed banners, pamphlets



Recipe Development



Training HCWs





BCC media

Banners
and
Pamphlets



Banners





Training Materials



Phase II: 2Kg Packets

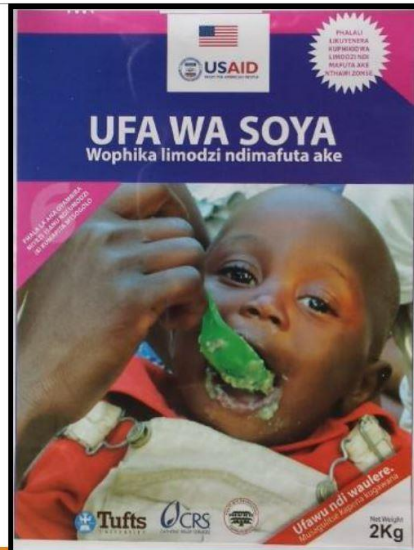
Phase II started in February, 2014 up to June, 2014

3. 2Kg CSB Packets intervention to 6 FDPs

- Made 2Kg packets with printed messages
- Distributed packets to 6 FDPs
- Trained over 300 HCWs on packet messages



Informational Stickers



Repacked CSB+



2Kg



8Kg



24Kg



Data Collection

- Projected Sample (Baseline, Phase 1 and Phase 2)
- Data Collected (Baseline, Phase 1 and Phase 2)



Results – Baseline and Phase 1

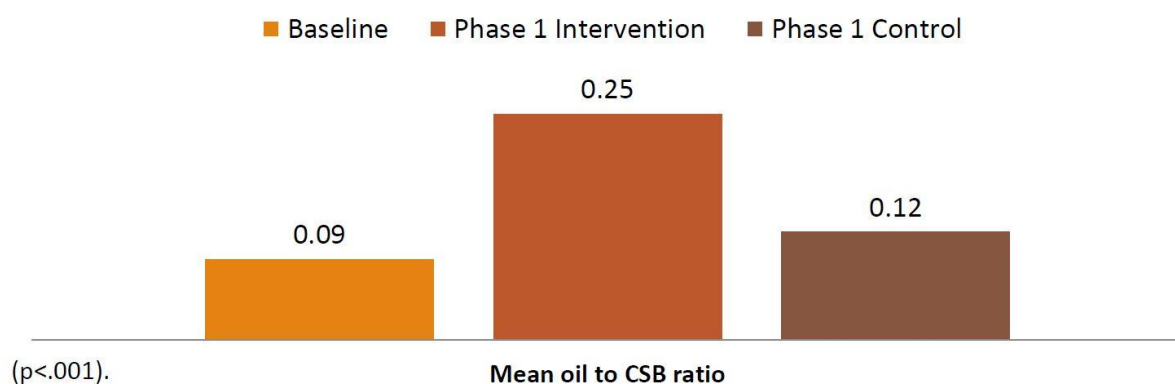
CHARACTERISTICS OF STUDY PARTICIPANTS

	Baseline			Phase I Intervention (oil and messaging)			Phase I Control		
	n	Mean	SD	n	Mean	SD	n	Mean	SD
Age of Beneficiary Child (months)	294	26.0	14.1	239	22.9	11.1	163	23.1	12.5
Age of BMC (years)	288	28.6	9.1	237	27.7	7.1	162	28.4	9.1
Percent of Households with one or two Beneficiary Children	294			239			163		
One		96.5%			94.6%			93.3%	
Two		3.5%			5.4%			6.7%	



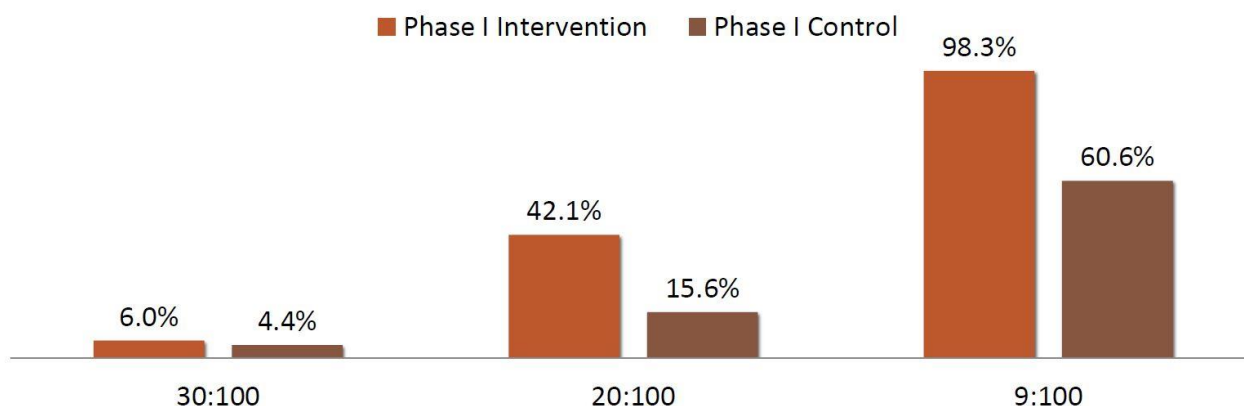
Results: Aim 1.1 – Oil to CSB Ratio (Target = 30:100)

Mean oil to CSB ratio in porridge, as determined by lab analysis



Aim 1.2 – Percent of mothers preparing porridge at target ratios (p<.001)

Percent of Mothers Preparing Porridge at Target Ratios in Phase I Intervention Group vs. Control Group

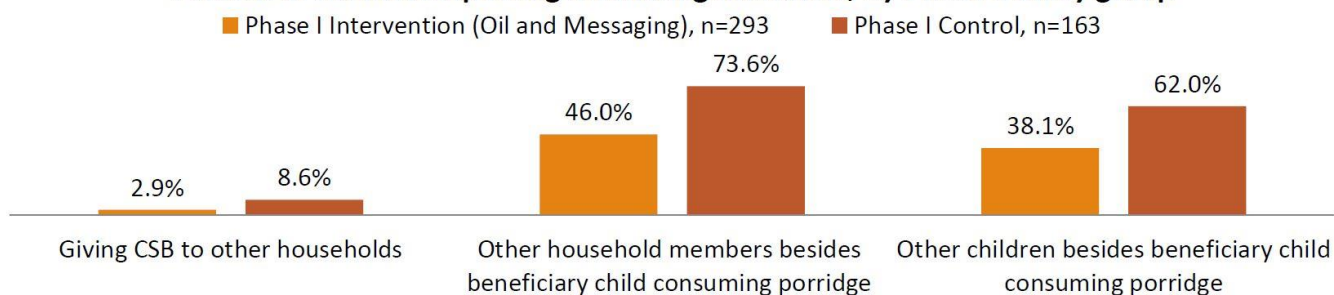




Aim 1.3 – Sharing within the household ($p < .001$)

	Phase 1 Intervention			Phase 1 Control		
	n	Mean	SD	n	Mean	SD
Mean amount of porridge fed to child (mL), reported	237	346	146	162	404	175

Percent of mothers reporting on sharing indicators, by Phase 1 study group



Aim 2 – Cost and Cost-Effectiveness (in progress)

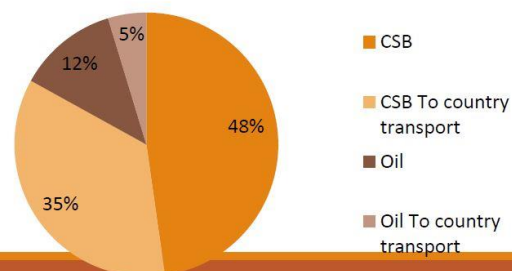
Costs

- Commodity
 - Transport to and within country
 - Warehousing
 - Loading, unloading
- Personnel
- Beneficiary time
- Program and Start-up costs
 - BCC messaging development
- Additional costs of Phase 1 and 2 repackaging, etc

Cost-Effectiveness Indicators

- Cost per additional beneficiary mother preparing porridge with target ratio
- Cost per additional percentage point of oil in porridge

Example: Baseline Commodity Costs

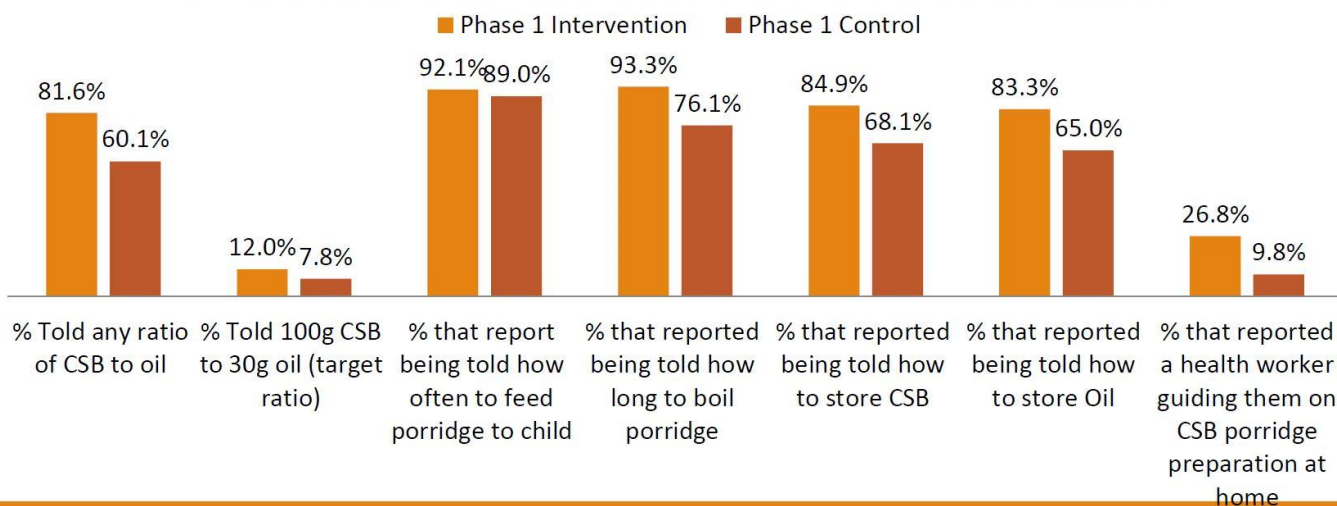




Aim 3: Determinants of Effectiveness Selected Process/Communication Indicators



Percent of mothers reporting on communication indicators, by study group



Way Forward





Way Forward

1. In-depth analysis with its derivative publications and recommendations
2. Determining cost and cost effectiveness of treating a MAM child at the household (cost of 1L FVO and 1Kg CSB)
3. Final Report to be shared with all partners
4. Potential effectiveness trials – in Malawi?



ZIKOMO
Thank You!



Annex III. Prevention Study Enrollment**Enrollment, Burkina Faso FAQR, August-December 2014**

Arm	August	Sept	Oct	Nov	Dec	TOTAL TO DATE
1	0	176	157	166	147	646
2	6	170	175	181	120	652
3	169	209	175	163	186	902
4	138	189	166	164	171	828
TOTALS	313	744	673	674	624	3028

Enrollment information, Burkina Faso FAQR, August-December 2014

Arm	Average* inclusions per month	SAM+ Referrals: Inclusion	SAM Referrals: Follow-up	Deaths	#Kids left to enroll	Estimated remaining months to complete enrollment	Estimated Enrollment Completion Date
1	162	6	3	2	854	5	May
2	162	3	4	1	848	5	May
3	183	9	1	1	598	3	March
4	173	8	4	3	672	4	April
TOTALS	170	26	12	7	2972		

*Average does not include the aberrant month of August

+SAM=Severe acute malnutrition

Annex IV. Prevention Study Qualitative Data Collection**Data collection, Burkina Faso FAQR, October-December 2014**

	In-depth Interview of Beneficiary Mothers	In-home observation of Beneficiary Mothers*	Porridge Collections	% porridge samples collected per completed interviews**	Water Tests	% water tests completed per completed interviews***
Totals	57	5	37	60%	62	100%
	Community Questionnaire	Focus Group of Distribution Committee	Lead Mother Interview	Promoter Interview	Focus Group of Beneficiary mothers	Observation of Distribution
Totals	199	0	0	0	0	1

***In-depth Interview of Beneficiary Mothers conducted at the end of the in-home observation**

****Denominator includes porridge collected during interviews at the end of the in-home observations**

*****Denominator includes water tests completed during interviews at the end of in-home observations**

Annex V. Follow-up Measurement Form Data Entry**Follow-up measurement forms entered at least once, Burkina Faso FAQR,
August-December 2014**

Arm	Forms entered	% forms entered of available forms	% forms entered of total eventual forms
1	482	75%	32%
2	108	17%	7%
3	0	0%	0%
4	0	0%	0%
TOTALS	590	92%	29%